

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Currently amended) A processor-implemented method for
2 enabling efficient communication between a first and a second node in a network
3 ~~of by~~-routing network traffic through fault zones in the network, the method
4 comprising:
5 identifying a path from ~~a~~ the first network node to ~~athe~~ the second network
6 node;
7 identifying a set of fault zones through which the identified path passes;
8 for each fault zone in the set of fault zones, assigning as a zone weight the
9 number of paths from the first network node to the second network node that
10 include said fault zone, wherein the zone weight is determined from the path
11 configuration of the network;
12 calculating a path weight for the identified path, wherein said path weight
13 is equal to the sums of said zone weights for each fault zone included in the
14 identified path; and
15 selecting the identified path as the current path for network traffic from the
16 first node to the second node,
17 whereby efficient communication from the first node to the second node is
18 enabled along the selected path.

- 1 2. (Original) The method of claim 1, further comprising:
2 identifying a new path from the first network node to the second network

3 node;
4 assigning zone weights to each fault zone in the new path;
5 calculating a new path weight for the new path; and
6 if the new path weight is lower than said path weight for the identified
7 path, selecting the new path as the current path for network traffic from the first
8 node to the second node.

1 3. (Currently amended) The method of claim 1, wherein:
2 the first network node is identified by a first identifier;
3 the second network node is identified by multiple identifiers, including a
4 second identifier;
5 selecting the identified path as the current path for network traffic from the
6 first node to the second node comprises selecting the identified path as the current
7 path for network traffic from the first ~~identifier~~node to the second node, wherein
8 the second node is identified by the second identifier; and
9 paths other than the identified path are selected as the current paths for
10 network traffic from the first node identifier to the second node, wherein the
11 second node is identified by multiple identifiers other than the second identifier.

1 4. (Currently amended) A computer readable medium storing
2 instructions that, when executed by a computer, cause the computer to perform a
3 method for enabling efficient communication between a first and a second node in
4 a network of by routing network traffic through fault zones in the network, the
5 method comprising:
6 identifying a path from ~~a~~the first network node to ~~a~~the second network
7 node;
8 identifying a set of fault zones through which the identified path leads;
9 for each fault zone in the set of fault zones, assigning as a zone weight the

10 number of paths from the first network node to the second network node that
11 include said fault zone, wherein the zone weight is determined from the path
12 configuration of the network;
13 calculating a path weight for the identified path, wherein said path weight
14 is equal to the sums of said zone weights for each fault zone included in the
15 identified path; and
16 selecting the identified path as the current path for network traffic from the
17 first node to the second node,
18 whereby efficient communication from the first node to the second node is
19 enabled along the selected path.

1 5. (Currently amended) A processor-implemented method for
2 enabling efficient communication between a first and a second node in a subnet of
3 by determining routing between nodes in a the subnet, the method comprising:
4 identifying multiple fault zones in the subnet, each fault zone comprising
5 one or more components of the subnet;
6 configuring a central subnet manager to manage routing between nodes in
7 the subnet;
8 identifying a set of paths from a first node having a first identifier to a
9 second node having multiple identifiers, including a second identifier, wherein
10 traffic is deliverable to the second node using any of the multiple identifiers;
11 for each fault zone traversed by one or more of the paths, establishing a
12 zone weight based on the number of paths from the first node to the second node
13 that traverse said fault zone, wherein the zone weight is determined from the path
14 configuration of the subnet;
15 for each path in the set of paths, establishing a path weight from the sums
16 of the zone weights for each fault zone traversed by said path; and
17 for each of the multiple identifiers of the second node, selecting as the

18 current path from the first ~~identifier~~ node to the second node identified by each of
19 the said ~~identifier~~ multiple identifiers, from said set of paths, the path having the
20 best path weight,
21 whereby efficient communication from the first node to the second node is
22 enabled along the selected path.

1 6. (Currently amended) A computer readable medium storing
2 instructions that, when executed by a computer, cause the computer to perform a
3 method for enabling efficient communication between a first and a second node in
4 a subnet ~~of by~~ determining routing between nodes in ~~a~~ the subnet, the method
5 comprising:
6 identifying multiple fault zones in the subnet, each fault zone comprising
7 one or more components of the subnet;
8 configuring a central subnet manager to manage routing between nodes in
9 the subnet;
10 identifying a set of paths from ~~a~~ the first node having a first identifier to ~~a~~
11 the second node having multiple identifiers, including a second identifier, wherein
12 traffic is deliverable to the second node using any of the multiple identifiers;
13 for each fault zone traversed by one or more of the paths, establishing a
14 zone weight based on the number of paths from the first node to the second node
15 that traverse said fault zone, wherein the zone weight is determined from the path
16 configuration of the subnet;
17 for each path in the set of paths, establishing a path weight from the sums
18 of the zone weights for each fault zone traversed by said path; and
19 for each of the multiple identifiers of the second node, selecting as the
20 current path from the first ~~identifier~~ node to the second node, wherein the second
21 node is identified by each of the said ~~identifier~~ multiple identifiers, from said set
22 of paths, the path having the best path weight,

23 whereby efficient communication from the first node to the second node is
24 enabled along the selected path.

1 7-13 (Canceled).

1 14. (Currently amended) A system for enabling efficient
2 communication between nodes in a subnet by determining routing through ~~a the~~
3 subnet comprising multiple fault zones, comprising:
4 a network node configured to interface a client computing device with the
5 subnet, wherein each node is identifiable by one or more node identifiers; and
6 a client computing device, comprising:
7 a processor; and
8 a subnet manager module configured to determine routing between
9 a first node and a second node in the subnet, wherein the first node is
10 addressable by a first identifier and the second node is addressable by
11 multiple identifiers, including a second identifier;
12 wherein said subnet manager determines routing between the first node
13 and second node by:
14 for each fault zone in the subnet traversed by a path from the first
15 node to the second node, calculating a zone weight based on the number of
16 paths from the first node to the second node that traverse said fault zone,
17 wherein the zone weight is determined from the path configuration of the
18 subnet;
19 for each of the paths from the first node to the second node,
20 calculating a path weight based on the sums of said zone weights for the
21 fault zones traversed by said path; and
22 selecting as the current path from the first ~~node identifier~~ to the second
23 node identified by the second identifier, the path ~~from the first identifier to the~~

24 ~~second identifier~~ having the best path weight,
25 whereby efficient communication from the first node to the second node is
26 enabled along the selected path.

1 15. (Original) The system of claim 14, wherein the client computing
2 device further comprises:
3 a memory configured to store path weights of current paths between
4 multiple pairs of node identifiers.

1 16. (Original) The system of claim 14, wherein said memory is further
2 configured to store, in association with each of the current paths, zone weights for
3 fault zones traversed by the current path.

1 17. (Original) The system of claim 14, wherein said subnet manager is
2 further configured to disseminate routing information to a plurality of nodes in the
3 subnet, said routing information including said current path from the first
4 identifier to the second identifier.

18-24 (Canceled).